OPTRONICS

Test and Termination Equipment

About Us

Optronics is a brand of fibre optic and copper networking products, for use in local and wide area networking and telecommunications applications.

Since 1974, Optronics has used it's expertise to build a comprehensive range of high quality network communications products which includes patch cords, pigtails (multimode and singlemode), patch panels, wall and splice boxes (unloaded and customised), and a full range of accessories.

Based in Milton Keynes, UK, we have the facilities to support a vast array of customers; from small distributors and supporting specialist installers.

Optronics products are available directly or from distributors all over the world.

Our History

> Optronics founded in 1974
> Established a Base in Milton Keynes, which is central to all the major UK national and international transport hubs
> Moved to a purpose built building in 2002

Our Capabilities

> Multilingual sales personnel
> Largest termination capacity in Europe
> Manufacturing across two continents
> Several partnerships globally
> Proactively aiding our clients to secure new and existing customers through designing and manufacturing bespoke products in necessary quantites

Optronics Global HQ, Milton Keynes, UK

A Global Company

> 120 Sales Executives employed
> 18 Languages spoken
> 24 hour design and engineering support capability
> Global logistics service
> Regions Covered
    North South America
    Europe
    Africa
    Middle East
    Australasia
> Optronics Limited. is registered in England and has regional offices in each major continent in the world.

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OPT-OTDR Multimode and Singlemode Fibre Optic OTDR

A powerful yet user friendly hand held OTDR specifically designed for testing and trouble-shooting enterprise, campus and access networks. Test multimode fibre within premises, or singlemode fibre between premises, with a single OTDR and maximise your return on investment. Improved fibre testing capability can be achieved with the optional power meter, VFL and inspection probe.

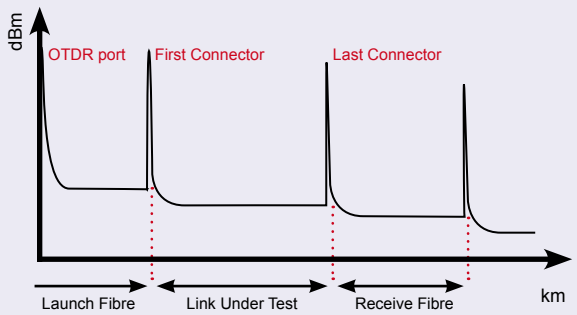
OPT-OTDR Multimode and Singlemode

FAST FACTS

- Simple, one-touch "FastTrace" testing
- Multiple options including power meter, visual fault locator (VFL) and fiber inspection probe
- Robust construction and long battery life; ideal for use in the field
- Available in 6 languages: English, French, German, Spanish, Russian and Chinese
- Store results on the OTDR or transfer direct to USB memory stick or PC

DID YOU KNOW

An OTDR requires a launch fibre (or Deadzone Eliminator) to be added to the link under test in order to provide an accurate reading of both insertion loss and back reflection of the near end connector. Inserted between the OTDR port and the first connector of the link under test, the launch fibre gives the light time to stabilise before it reaches the first connector, enabling the OTDR to make an accurate measurement. A receive fibre should also be placed at the end of the link under test to accurately measure the performance of the last connector.

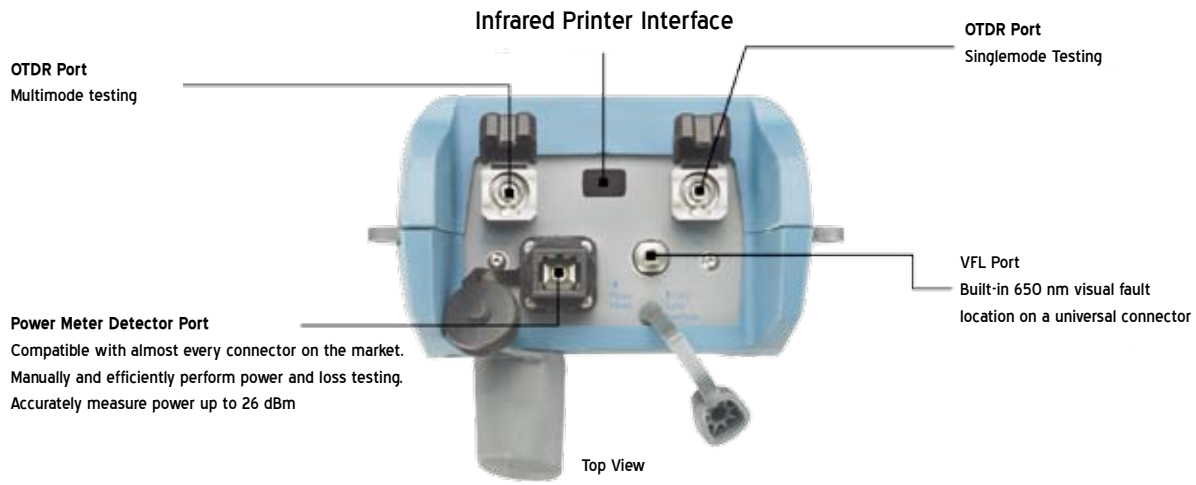


Application

Characterisation and trouble-shooting of enterprise, campus and access fibre networks

See our range of Fibre Optic Dead Zone Eliminators on p 30

OPT-OTDR Multimode and Singlemode Fibre Optic OTDR


Infrared Printer Interface
OTDR Port
Multimode testing
OTDR Port
Singlemode Testing
VFL Port
Built-in 650 nm visual fault
location on a universal connector
Power Meter Detector Port
Compatible with almost every connector on the market.
Manually and efficiently perform power and loss testing.
Accurately measure power up to 26 dBm
Top View

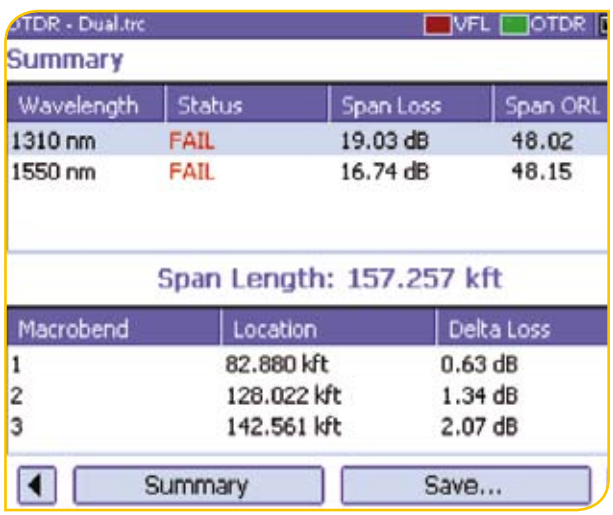
View our video at www.optronicsnet.com for more information

Download to PC via USB

On-Screen Trace Analysis

Fast acquisition and analysis - generate your OTDR trace in as little as five seconds, and then easily analyse the result by toggling between events, getting an instant zoom on the trace. The moveable A & B markers give you the flexibility to read the power level at any point along your OTDR trace.

OTDR Reporting Software

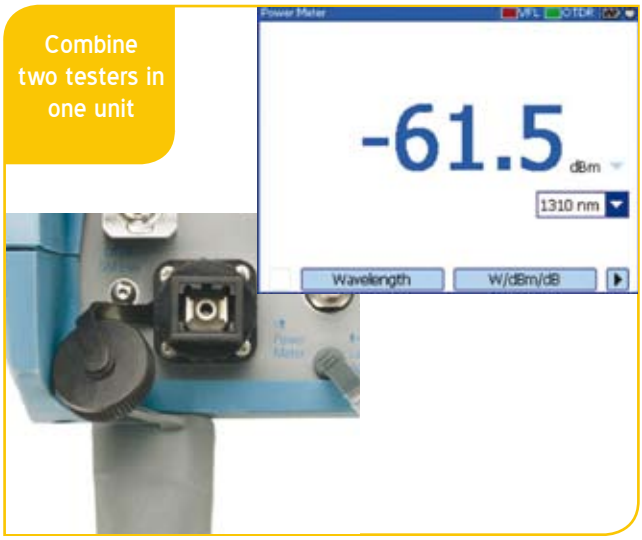


Pass/Fail and Macrobend Detection - benefit from an instant on-screen test summary that gives clear indication of potentially problematic fibre links and a clear detection of macrobends.

Versatile reporting software - benefit from high-end reporting software allowing deeper analysis of the OTDR trace. Transfer results easily from the OTDR direct to your PC and generate reports choosing from a number of available formats, even adding in your own custom logo.

OPT-OTDR Multimode and Singlemode Fibre Optic OTDR

Combine two testers in one unit



Power Meter Option

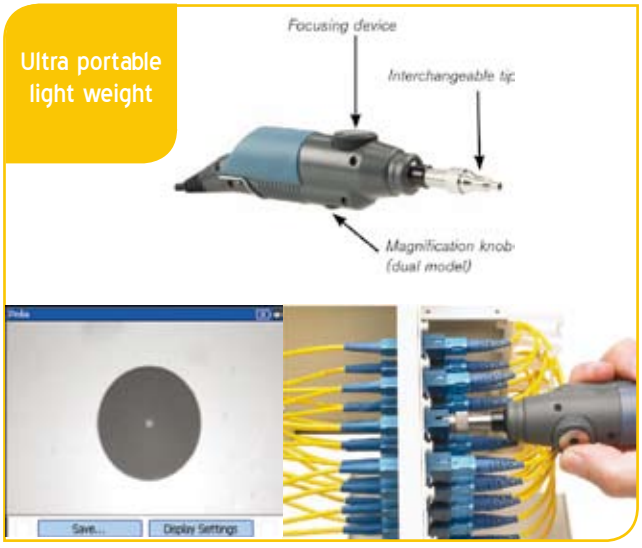
Adding the power meter to the OTDR gives the flexibility of two testers in one. It can be used in conjunction with an external light source or by means of looping back the OTDR can be used as both light source and power meter.

Visual Fault Locator (VFL) Option

With a 650nm visible red laser the VFL will verify continuity and polarity of installed links, helping to speed up installation time. Locate breaks, excessive fibre bends, connectors, splices and ensure that fibre management is carried out correctly.

Combine two testers in one unit

Ultra portable light weight



Inspection Probe Option

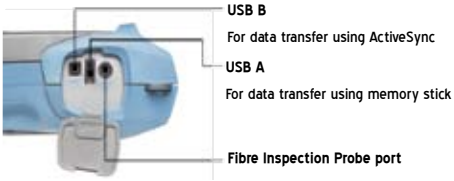
The probe allows the user to inspect connector end faces in switches, routers, patch panels, wall outlets and patchcords. Time is saved by eliminating the need to access the back of patch panels or to disassemble hardware devices for inspection. Save and download your image for documentation.

CLICK: WWW.OPTRONICSNET.COM CALL: +44 (0)1908 441 121 CONTACT: SALES@OPTRONICSNET.COM

OPT-OTDR Multimode and Singlemode Fibre Optic OTDR

Technical Specification

	MULTIMODE	SINGLEMODE
Wavelength	850/1300nm	1310/1550nm
Dynamic Range	20/20dB	25/24dB
Event Dead Zone	3.5m	3m
Attenuation Dead Zone	12/12m	12/13m
Sampling Points	Over 30,000	
Distance Range	5km	50km
Internal Memory	500 Results	
OTDR Port Connector	SC	
Size (H x W x D)	250mm x 125mm x 75mm	
Weight	1kg	
Operating Temperature	-18 °C to 50°C	
Battery	2 x Li-ion batteries 8 hours continuous use	



Ordering Information

DESCRIPTION	PART NO.
Quad wavelength MM & SM auto OTDR. Power supply, soft case, SC connectors	OPT-OTDR -XX
Quad wavelength MM & SM auto OTDR. Power supply, soft case, including power meter option. SC connectors	OPT-OTDR-P-XX
Quad wavelength MM & SM auto OTDR. Power supply, soft case, including visual fault locator option. SC connectors	OPT-OTDR-V-XX
Quad wavelength MM & SM auto OTDR. Power supply, soft case, including power meter and visual fault locator options. SC	OPT-OTDR-VP-XX
Quad wavelength MM & SM auto OTDR. Power supply, soft case, including visual fault locator and power meter options with x400 fibre inspection probe and software. SC connectors	OPT-OTDR-PRO-XX
Quad wavelength MM & SM auto OTDR. Power supply, soft case, including visual fault locator and power meter options with x200/400 fibre inspection probe and software. SC connectors	OPT-OTDR-PRO24-XX
Pass/Fail and Macrobend Fault FInder Software (when ordered with OTDR)	OPT-OTDR-SK1
Pass/Fail and Macrobend Fault Finder Software Upgrade (when ordered after OTDR)	OPT-OTDR-SK1-UPG
Optronics ST Connector Adapter for OTDR Port	OPT-OTDR-ADPT-ST
Optronics SC Connector Adapter for OTDR Port	OPT-OTDR-ADPT-SC
Optronics FC Connector Adapter for OTDR Port	OPT-OTDR-ADPT-FC
Optronics x400 Inspection Probe for OTDR, includes software and connection lead	OPT-OTDR-PROBE-4
Optronics x200/x400 Inspection Probe for OTDR, includes software and connection lead	OPT-OTDR-PROBE-24
Optronics OTDR UK Power Adapter	OPT-OTDR-AC-UK
Optronics OTDR EU Power Adapter	OPT-OTDR-AC-EU
Optronics rechargeable battery for OTDR (2 required)	OPT-OTDR-BAT
Optronics Test Soft Case (OTDR)	OPT-SOFTCASE-A
OPT-OTDR calibration charge for OTDR	OPT-OTDR-CAL1
OPT-OTDR-P calibration charge for OTDR with power meter	OPT-OTDR-CAL2
Extended warranty for OPT-OTDR + 1year	OPT-OTDR-WAR1
Extended warranty for OPT-OTDR + 2year	OPT-OTDR-WAR2
Extended warranty for OPT-OTDR + 3year	OPT-OTDR-WAR5

xx = UK, EU or US power supply

OPTMSKIT-2 MM+SM Fibre Optic Power Meter and Light Source Kit

Combining the OPT-ELS-100 Light Source and OPT-EPM-500 Power Meter, the OPTMSKIT-2 is ideally suited for fibre optic link qualification and validation within premises networks. Test both multimode and singlemode fibre with one kit, download the test results via USB to PC and create professional reports with the included software.

OPT-ELS-100 Optical Light Source

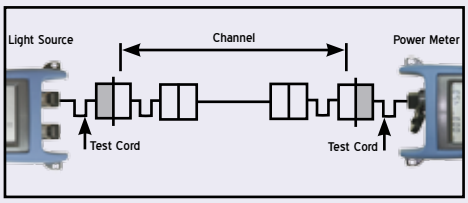
OPT-EPM-500 Optical Power Meter

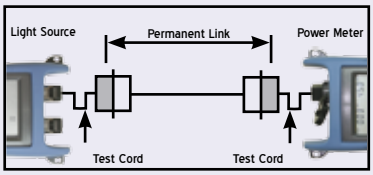
FAST FACTS

- Memory capacity for 1000 data items
- Pass/Fail with LED indicators
- Tone generation and recognition
- Complete test kit with jumper leads and mandrels
- Numerous connector adapters available for true flexibility

DID YOU KNOW

A Light Source and Power Meter set will accurately determine the total amount of loss or attenuation in a fibre span under test. At one end of the fibre, a stable light source emits a signal that consists of a continuous wave at a specific wavelength. At the other end, an optical power meter detects and measures the power level of that signal. In very general terms, the difference in power level of the signal measured at the transmitting and receiving ends corresponds to the loss of the fibre under test.





Application

Measuring signal attenuation (power loss) across singlemode or multimode fibre links.

See our range of Fibre Optic Master Test Leads on p 32

OPTMSKIT-2 MM+SM Fibre Optic Power Meter and Light Source Kit

Instant Pass/Fail Indication

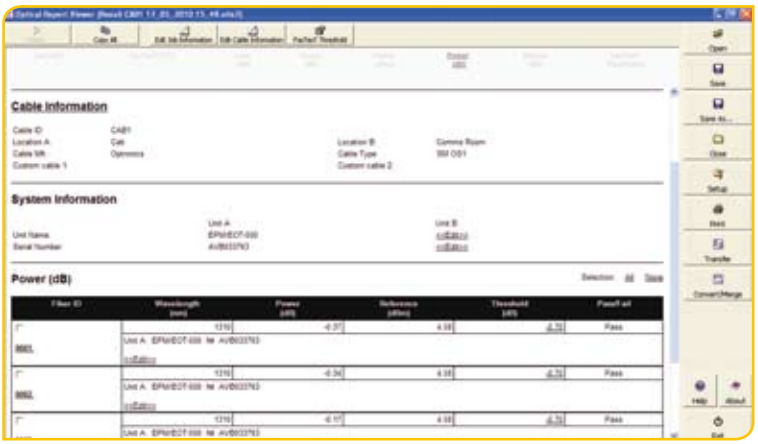
Set up pass/fail thresholds for all wavelengths either for loss in dB or for power in dBm. A clear LED will give an instant indication of whether the link under test has passed (green light) or failed (red light), allowing for quick and easy identification of problem fibres.

View our video at www.optronicsnet.com for more information

Download to PC via USB

OPTMSKIT Reporting Software

Produce professional-looking reports with the OPTMSKIT-2's reporting software. Results stored on the power meter can be easily and quickly downloaded to your PC via the USB cable supplied. Pass/fail thresholds set in the unit are automatically activated and stored in the report viewer where they can be set for individual fibres or wavelengths. Two separate files can even be merged in one test report.



OPTMSKIT-2 MM+SM Fibre Optic Power Meter and Light Source Kit

Interchangable adapters

Connectivity

A large range of interchangeable connecter adapters are available for both the light source and power meter allowing the user ultimate flexibility in fibre testing.

Data Transfer

Test results can be quickly and easily downloaded direct to a PC from the power meter USB port. Further analysis of results and the creation of professional reports are made possible with the inclusive reporting software.

USB Connectivity

Mains Connectivity

Power

Run the testers from their batteries for up to 70 hours or directly from the mains with the supplied AC plug adapters.

OPTMSKIT-2 MM+SM Fibre Optic Power Meter and Light Source Kit

Technical Specification

SPECIFICATION [A]		
MODEL [b]	OPT-ELS-100	
	Singlemode	Multimode
Central wavelength (nm)	1310 ± 20 1550 ± 20	850 ± 25 1300 + 50/-10
Spectral width [c] (nm)	≤ 5	50/135
Output Power (dBm)	≥ 1/ ≥ 1	≥ -20/ ≥ -20 (62.5/125 µm)
Power stability [d] for 8 hours (dB)	± 0.10	
Battery life (hours) (typical)	50	55
Warranty	1 year	
Size (H x W x D)	185 mm x 100 mm x 55 mm (7 1/4 in x 4 in x 2 1/8 in)	
Weight	0.4 kg	
Temperature	operating -10°C to 50°C storage -40°C to 70°C	
Relative humidity	0% to 95 % non-condensing	

Notes :
a. Guaranteed unless otherwise specified
b. All specifications valid at 23°C ± 1 °C, with an FC connector
c. rms for lasers and FWHM for LEDs; Typical values for LEDs
d. After 15 minutes warm-up; expressed as ± half the difference between the maximum and minimum values measured during this period, with an APC connector on the power meter

SC Connector Adapter for OPT-ELS-100

SPECIFICATION [b]	
MODEL [b]	OPT-EPM-500
Detector [c]	Germanium
Power range [d] (dBm)	10 to -70
Wavelength range (nm)	800 to 1650
Number of calibrated wavelengths [e]	6
Power uncertainly [f]	± 5 % ± 0.1 nW
Automatic offset nulling [g]	0.01
Display units	dB/dBm/W
Tone detection	270 Hz,1 kHz, 2 kHz
Warm-up period [h] (min)	0
Data storage (items)	Up to 1000
Battery life (hours) (typical)	70
Warranty	1 year
Size (H x W x D)	185 mm x 100 mm x 55 mm (7 1/4 in x 4 in x 2 1/8 in)
Weight	0.4 kg
Temperature	operating -10°C to 50°C storage -40°C to 70°C
Relative humidity	0% to 95 % non-condensing

Notes :
a. Guaranteed unless otherwise specified
b. All specifications valid at 23°C ± 1 °C, with an FC connector
c. All specifications valid at 1550 nm and 23°C ± 1 °C, with an FC connector
d. In Cw mode; sensitivity defined as 6 x rms noise level
e. At 850nm, 1300nm, 1310nm, 1490nm,1550nm and 1625nm; for power → -50 dBm for OPT-EPM-500. For calibration wavelengths
f. For calibrating wavelengths
g. For power → -40 dBm
h. For a variation of ≤ 0.06 dB at power levels ≥ -40 dBm

LC Connector Adapter for OPT-EPM-500

Ordering Information

DESCRIPTION	PART NO.
Optronics Multimode & Singlemode Optical Test Kit With EU AC Adaptor	OPTMSKIT-2
Optronics Multimode & Singlemode Optical Test Kit With UK Adaptor	OPTMSKIT-2/UK
Connector Adaptor for OPT-ELS 100 Light Source	OPT-ELS-100-
Connector Adaptor for OPT-EPM 500 Power meter	OPT-EPM-500-XX[2]
Pack of 10 protective covers	OPT-ELS-100-CVR

XX[1] = FC, ST, SC, E2000
XX[2] = FC, ST, SC, E2000, LC

OPTMSKIT-3 SM+MM Power Meter and Light Source Kit

The OPTMSKIT-3 test kit combines the OPT-EPM-50 optical power meter and OPT-ELS-50 and 50-S light sources and provides a cost-effective solution for testing both multimode and singlemode fibre networks. The OPT-EPM-50 power meter offers reference setting function and readings in dB, dBm and Watts. Added to this are an InGaAs detector and tone recognition for fibre identification. The battery has the capability to support up to 300 hours use.

With excellent power stability the OPT-ELS-50 and 50-S light sources give the end user the confidence that they will have reliable loss measurements time and again. The units also offers tone generation for fibre finding and up to 60 hours of battery life. The OPTMSKIT-3 also comes complete with high quality jumper leads in 50/125µm, 62.5/125µm and 9/125µm, and 50µm & 62.5µm mandrels. All units come with SC connector adaptors as standard. ST and FC interchangeable adaptors are available allowing for increased flexibility.

OPT-ELS-50

FAST FACTS

- Cost effective, rugged handheld instruments designed for reliable performance
- Reference function for direct loss measurements
- Tone generation and recognition
- Interchangeable connectors for flexibility
- Complete test kit with jumper leads and mandrels
- Individual cases for each tester, plus a case for accessories

OPT-EPM-50

OPT-ELS-50-S

Standard Accessories

2x SC-SC 62.5/125 1.5m Simplex Jumper Lead,
2x SC-SC 50/125 1.5m Simplex Jumper Lead,
2x SC-SC 9/125 1.5m Simplex Jumper Lead,
1 x 62.5/125 mandrel wrap,
1 x 50/125 mandrel wrap,
2 Carrying Cases, Batteries,
User-manual is available to download on our website

CLICK: WWW.OPTRONICSNET.COM CALL: +44 (0)1908 441 121 CONTACT: SALES@OPTRONICSNET.COM

OPTMSKIT-3 SM+MM Power Meter and Light Source Kit

Technical Specification

SPECIFICATION [a]		
MODEL	OPT-ELS-50	OPT-ELS-50-S
Central wavelength (nm)[b]	850 ± 25 1300 + 50/-10	1310 ± 20 1550 ± 20
Spectral width (nm)[b,c]	≥40/120	≤5
Output power (dBm)	≥-24/ ≥-21 (50/125 µm)	≥-5
Power stability (dB)[b,d]	± 0.10	± 0.10
Battery life (hours)[b]	60	60
Warranty (year)	1	1
Tone generation (Hz)	270, 1k, 2k	270, 1k, 2k
Size(HxWxD)	188mm x 83 mm x 35 mm (7 7/16 in x 3 5/16 in x 1 7/16 in)	188mm x 83 mm x 35 mm (7 7/16 in x 3 5/16 in x 1 7/16 in)
Weight	0.4 kg (0.9lb)	0.4 kg (0.9lb)
Temperature	operating -10°C to 50°C (14°F to 122°F)	operating -10°C to 50°C (14°F to 122°F)
Relative humidity	0% to 95% non-condensing	0% to 95% non-condensing

SAFETY

21 CRF 1040.10 and IEC 60825-1:2007
CLASS 1 LASER PRODUCT

Notes :
a. All specifications valid at 23°C ± 3°C, with an FC/UPC connector
b. Typical
c. rms for lasers and -3 dB width for LEDs
d. After 15 minutes warm up; expressed as ± half the difference between the maximum and minimum values measured over 8 hours.

SPECIFICATION [a]	
MODEL	OPT-EPM-50
Power meter port	InGaAs
Power range [b] (dBm)	10 to-60
Number of calibrated wavelengths [c]	5
Power uncertainly [d]	± 5 %
Resolution (dB)	0.01
Display units	dB/dBm/W
Tone detection (Hz)	270,1k, 2k
Battery life (hours) [d]	➔300
Warranty (year)	1
Size (HxWxD)	188 mm x 83 mm x 35 mm (7 7/16 in x 3 5/16 x 1 7/16 in)
Weight	0.4 kg (0.9 lb)
Temperature	operating -10°C to 50°C (14°F to 122°F) storage -40°C to 70°C (-40°F to 158°F)
Relative humidity	0% to 95% non-condensing

Notes :
a. All specifications valid at 23°C ±3°C, with an FC/UPC connector
b. In CW mode
c. Wavelength: 850 nm, 1300 nm, 1310 nm, 1490 nm 1550 nm
d. Typical

Ordering Information

DESCRIPTION	PART NO.
Optronics Multimode and Singlemode Optical Test Kit	**OPTMSKIT-3**

DESCRIPTION	PART NO.
Connector Adaptor for OPT-ELS-50 Light Source	OPT-ELS-50-xx
Connector Adaptor for OPT-EPM- 50 Power Meter	OPT-EPM-50-xx
Protective rubber boot for OPT-ELS-50 Light Source and OPT-EPM-50 Power Meter	OPT-EPMELS-50-BOOT
Pack of 10 replacement ceramic sleeves for OPT-ELS-50 Light Source	OPT-ELS-50- SLEEVE

XX = either FC, SC or ST

OPTMKIT-2 MM Fibre Optic Power Meter and Light Source Kit

The OPTMKIT-2 is the perfect choice for testing multimode fibre links within enterprise and local area networks. With a high-quality InGaAs power meter measuring in dB, dBm or Watts, and battery life of up to 300hrs, these rugged instruments guarantee reliable and repeatable performance in the field. With SC connectivity as standard, the OPTMKIT-2 comes complete with reference jumper leads and fibre mandrels, giving you all you need to test straight out of the box.

OPT-ELS-50 Optical LIght Source

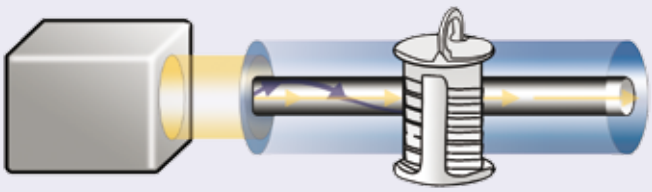
OPT-EPM-50 Optical Power Meter

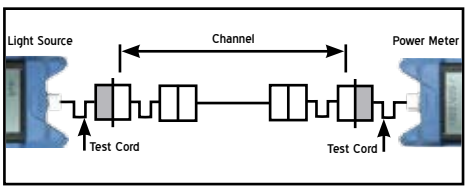
FAST FACTS

- Rugged hand-held instruments designed for reliable performance
- Reference function for direct loss measurements
- Tone recognition and generation for fibre identification
- Interchangeable connector adapters available

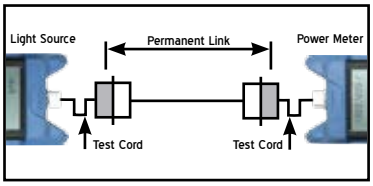
DID YOU KNOW

Wrapping your test reference cord five times around a fibre mandrel ensures a consistent launch condition in line with international standards when testing multimode fibres. Creating a controlled bend condition along the fibre in this way removes the less stable, higher order modes of light which propagate near the fibre cladding, resulting in increased accuracy and improved repeatability.





See our range of Fibre Optic Master Test Leads on p 32



Application

Measuring signal attenuation (power loss) across multimode fibre links.

OPTMKIT-2 MM Fibre Optic Power Meter and Light Source Kit

Technical Specification

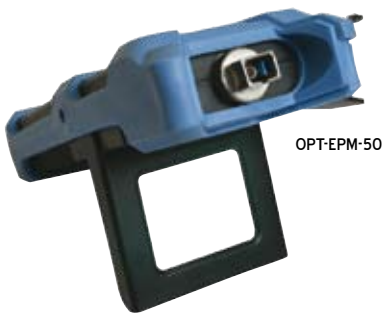
SPECIFICATION [a]	
MODEL	OPT-ELS-50
Central wavelength (nm)[b]	850 ± 25 1300 + 50/-10
Spectral width (nm)[b,c]	≥ 40/120
Output power (dBm)	≥ -24 (50/125 µm)
Power stability (dB)[b,d]	± 0.10
Battery life (hours)[b]	45
Warranty (year)	1
Tone generation (Hz)	270, 1k, 2k
Size(HxWxD)	188mm x 83 mm x 35 mm ($7^{7/16}$ in x $3^{5/16}$ in x $1^{7/16}$ in)
Weight	0.4 kg (0.9lb)
Temperature	operating -10°C to 50°C (14°F to 122°F)
Relative humidity	0% to 95% non-condensing

SAFETY
21 CRF 1040.10 and IEC 60825-1:2007
CLASS 1 LASER PRODUCT

Notes :
a. All specifications valid at 23°C ± 3°C, with an FC/UPC connector
b. Typical
c. rms for lasers and -3 dB width for LEDs
d. After 15 minutes warm up; expressed as ± half the difference between the maximum and minimum values measured over 8 hours.

SPECIFICATION [b]	
MODEL	OPT-EPM-50
Power meter port	InGaAs
Power range [b] (dBm)	10 to-60
Number of calibrated wavelengths [c]	5
Power uncertainly [d]	± 5 %
Resolution (dB)	0.01
Display units	dB/dBm/W
Tone detection (Hz)	270,1k, 2k
Battery life (hours) [d]	> 300
Warranty (year)	1
Size (HxWxD)	188 mm x 83 mm x 35 mm ($7^{7/16}$ in x $3^{5/16}$ x $1^{7/16}$ in)
Weight	0.4 kg (0.9 lb)
Temperature	operating -10°C to 50°C (14°F to 122°F) storage -40°C to 70°C (-40°F to 158°F)
Relative humidity	0% to 95% non-condensing

Notes :
a. All specifications valid at 23°C ± 3°C, with an FC/UPC connector
b. In CW mode
c. Wavelength: 850 nm, 1300 nm, 1310 nm, 1490 nm 1550 nm
d. Typical



OPT-EPM-50

Ordering Information

DESCRIPTION.	PART NO.
Multimode Test Kit consisting of OPT-EPM-50 and OPT-ELS-50	OPTMKIT-2
FC Connector adapter for OPT-ELS-50 Light Source	OPT-ELS-50-FC
SC Connector adapter for OPT-ELS-50 Light Source	OPT-ELS-50-SC
ST Connector adapter for OPT-ELS-50 Light Source	OPT-ELS-50-ST
FC Connector adapter for OPT-EPM-50 Power Meter	OPT-EPM-50-FC
SC Connector adapter for OPT-EPM-50 Power Meter	OPT-EPM-50-SC
ST Connector adapter for OPT-EPM-50 Power Meter	OPT-EPM-50-ST
Protective rubber boot for OPT-ELS-50 Light Source and OPT-EPM-50 Power Meter	OPT-EPMELS-50-BOOT
Pack of 10 replacement ceramic sleeves for OPT-ELS-50 Light Source	OPT-ELS-50-SLEEVE

OPTSKIT Singlemode Power Meter and Light Source Kit

The OPTSKIT test kit combines the OPT-EPM-50 optical power meter and OPT-ELS-50-S light source and provides a cost-effective solution for testing singlemode fibre networks.

The OPT-EPM-50 power meter offers reference setting function and readings in dB, dBm and Watts. Added to this are an InGaAs detector and tone recognition for fibre identification. The battery has the capability to support up to 300 hours use.

With excellent power stability the OPT-ELS-50-S light source gives the end user the confidence that they will have reliable loss measurements time and again. The unit also offers tone generation for fibre finding and up to 60 hours of battery life.

To complete your testing portfolio, the OPTSKIT also comes complete with high quality jumper leads in 9/125µm with SC connectors as standard. Both units come with SC adaptors as standard. ST and FC interchangeable adaptors are available allowing for increased flexibility.

FAST FACTS

- Cost effective, rugged handheld instruments designed for reliable performance
- Reference function for direct loss measurements
- Tone generation and recognition
- Interchangeable connectors for flexibility
- Complete test kit with jumper leads
- Individual cases for each tester, plus a case for accessories

Standard Accessories

2x SC-SC 9/125 1.5m Simplex Jumper Lead, 2 Carrying Cases, Batteries, User-manual is available to download on our website

OPTSKIT Singlemode Power Meter and Light Source Kit

Technical Specification

SPECIFICATION [a]	
MODEL	OPT-ELS-50-S
Central wavelength (nm)[b]	1310 ± 20 1550 ± 20
Spectral width (nm)[b,c]	≤5
Output power (dBm)	≥ -5
Power stability (dB)[b,d]	± 0.10
Battery life (hours)[b]	60
Warranty (year)	1
Tone generation (Hz)	270, 1k, 2k
Size(HxWxD)	188mm x 83 mm x 35 mm ($7^{7/16}$ in x $3^{5/16}$ in x $1^{7/16}$ in)
Weight	0.4 kg (0.9lb)
Temperature	operating -10°C to 50°C (14°F to 122°F)
Relative humidity	0% to 95% non-condensing

SPECIFICATION [a]	
MODEL	OPT-EPM-50
Power meter port	InGaAs
Power range [b] (dBm)	10 to-60
Number of calibrated wavelengths [c]	5
Power uncertainly [d]	± 5 %
Resolution (dB)	0.01
Display units	dB/dBm/W
Tone detection (Hz)	270,1k, 2k
Battery life (hours) [d]	→300
Warranty (year)	1
Size (HxWxD)	188 mm x 83 mm x 35 mm ($7^{7/16}$ in x $3^{5/16}$ x $1^{7/16}$ in)
Weight	0.4 kg (0.9 lb)
Temperature	operating -10°C to 50°C (14°F to 122°F) storage -40°C to 70°C (-40°F to 158°F)
Relative humidity	0% to 95% non-condensing

Safety

SAFETY
21 CRF 1040.10 and IEC 60825-1:2007 CLASS 1 LASER PRODUCT

Notes :
a. All specifications valid at 23°C ± 3°C, with an FC/UPC connector
b. Typical
c. rms for lasers
d. After 15 minutes warm up; expressed as ± half the difference between the maximum and minimum values measured over 8 hours.

Notes :
a. All specifications valid at 23°C ± 3°C, with an FC/UPC connector
b. In CW mode
c. Wavelength: 850 nm, 1300 nm, 1310 nm, 1490 nm 1550 nm
d. Typical

Ordering Information

DESCRIPTION	PART NO.
Optronics Singlemode Optical Test Kit	OPTSKIT

DESCRIPTION	PART NO.
Connector Adaptor for OPT-ELS-50 Light Source	**OPT-ELS-50-xx**
Connector Adaptor for OPT-EPM- 50 Power Meter	**OPT-EPM-50-xx**
Protective rubber boot for OPT-ELS-50 Light Source and OPT-EPM-50 Power Meter	**OPT-EPMELS-50-BOOT**
Pack of 10 replacement ceramic sleeves for OPT-ELS-50 Light Source	**OPT-ELS-50- SLEEVE**

XX = either FC, SC or ST

OPT-FR Fibre Ranger

The Optronics Fibre Ranger offers the latest in OTDR testing technology in an easy to use portable and rugged handheld package. With the simple touch of a button, measure the distance of a singlemode fibre link and locate any potentially problematic reflective and non-reflective (loss) incidents. In seconds the Fibre Ranger will accurately locate severe bends, breaks, high-loss splices and high-loss connector interfaces. With no complex data to interpret, on-screen analysis is straightforward allowing for rapid problem identification.

FAST FACTS

- Portable, rugged and lightweight
- Easy to use - no complex OTDR training necessary
- Locate up to 8 incidents
- Automatic power & pulse width control designed for easy operation
- Built-in visual fault locator (VFL)
- Dust, water and shock proof, designed for use in the field
- Long battery life with over 5000 tests

Application

Fibre optic link measurement, Location of reflective and non reflective incidents, fibre repair & maintenance

Accessories

Soft carry case, 3 x AA batteries, User manual

See our Fibre Optic Dead Zone Eliminator on p 30

OPT-FR Fibre Ranger

Technical Specification

PARAMETER		VALUE
Operating Wavelength		1550nm
Fibre Type		9/125µm SM Fibre
Optical Connector Type		FC/PC
Detector Type		InGaAs
Peak Power of Laser		≥60mW
Max. Displaying Distance	Reflective Event	60km (≥1dB)
	Non-reflective Event	20km (≥2.5dB)
Measurement Unit		m
Reflective Event Dead Zone		15m
Distance Accuracy (Reflective Event)		± (2m+2*10(-3)*Distance(m))
Wavelength of VFL Option		650nm
Output Power of VFL Option		1mW typical
Power Supply		Alkaline Battery (3pcs AA 4.5V Batteries)
Battery Life		≥5000 measurements
Working Temperature Range		-5~40°C
Storage Temperature Range		-10~60°C
Humidity		0~85% (Non-condensating)
Dimensions		190*100*50mm
Weight		450g

Fibre Ranger Complete Test Kit

Order the OPT-FR-KIT and get everything you need to test, troubleshoot, inspect and clean your singlemode fibre link in one package:

Technical Specification

PARAMETER	VALUE
Optronics Fibre Ranger	1
Optronics Compact Dead Zone Elimator 500m 9/125	1
Optronics Lint Free Cleaning Tissues	100
Optronics Soft Black Carry Case	1
Optronics IPA Cleaning Wipes	10
Optronics 2.5mm Foam Cleaning Buds	100
Optronics 1.25mm MicroFibre Cleaning Sticks	100
FibreCare Connector Cleaning Fluid	1
FibreCare Fibre Preparation Fluid	1
Cletop-S Type B Cassette Cleaner	1
OptronicsTest Fibre Inspection Scope 200x	1

Ordering Information

DESCRIPTION	PART NO.
Optronics Fibre Ranger	OPT-FR
Optronics Fibre Ranger Complete Test Kit	OPT-FR-KIT

OPTVFL-2 Pen-style Visual Fault Locator

The OPTVFL-2 is a slim-line, compact visual fault locator, designed to troubleshoot faults on fibre optic cables. It's light-weight, pen style makes it ideal for the installer to carry with them on site.

The OPTVFL-2 is an excellent addition to an engineers tool set because it can locate broken fibre inside the OTDR's dead-zone. Being portable and light it lends itself to other applications, including end-to-end continuity checks, identifying connectors in patch panels, and identifying fibres during splicing operations. The universal connector interface provides fast operation with many connector styles, without the need to change adapters.

FAST FACTS

- 650nm visible red laser source
- 2.5mm universal connector interface for quick connection
- Slim line pen-style with handy pocket clip
- High power (1mW)

Technical Specification

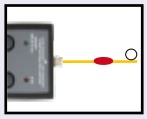
PARAMETER	VALUE
Size (L x d)	170mm x 13.5mm
Weight	88g (including batteries)
Connector type	Universal 2.5mm adapter
Power	2 AA alkaline batteries (40 hours typical)
Operating temperature	0 to 40°C, 95% humidity non condensing
Storage temperature	-20 to 60°C, 95% humidity non condensing
Emitter type	Class 2 Laser diode
Wavelength:	650nm nominal
Output power	1 mW (into single-mode fibre)
Modulation	2 Hz or CW selected

Ordering Information

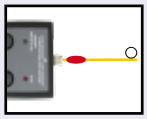
DESCRIPTION	PART NO.
Optronics Pen-style Visual Fault Locator	**OPTVFL-2**
1.25 Adaptor available	OPTVFL-2-ADPT1.25

DID YOU KNOW

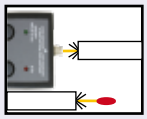
A visual fault locator emits a visible red light (transmitting at 650nm) that, when directed through an optical fibre, can help locate breaks or critical bends. It can also be used to help check continuity and identify a fibre's far end.



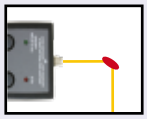
To Detect Fibre Breaks



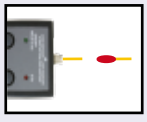
Identify Defective Connectors



Performs Continuity Checks



Find Loss Inducing Bends



Optimise Fibre Splices

OPTVFL-MINI Fibre Optic Visual Fault Locator

The OPTVFL-MINI is a powerful pocket-sized visual fault locator, designed to trouble shoot faults on fibre optic cables. Small enough to easily fit inside an installers pocket or tool belt, it is the ideal tool to carry on site and have on hand for any emergency.

The OPTVFL-MINI is a necessary addition to an engineers tool set because it can identify breaks, bends and connector losses inside the OTDR's dead-zone. Portable and light, it lends itself to other applications, including end-to-end continuity checks, identifying connectors in patch panels and identifying fibres during splicing operations. The universal 2.5mm connector interface provides fast operation with many connector styles, without the need to change adapters.

FAST FACTS

- 650nm visible red laser source
- Truly pocket size, complete with protective soft case
- High power (1mW)
- 2.5mm universal connector interface for quick connection (for SC/ST/FC)
- 1.25mm universal adapter available (for LC/MU)

Technical Specification

GENERAL	OPTVFL
Connector type	Universal 2.5mm adapter
Power	2 AA alkaline batteries
Operating temperature	-10 to 45°C
Storage temperature	-40 to 70°C
Size (H x W x D)	100 x 30 x 18mm
Weight:	60g including batteries

OPTICAL	OPTVFL
Emitter type	Class 2 laser diode
Wavelength	650 nm - 10 nm
Output power	1 mW continuous wave
Modulation	2 Hz or CW selected

Ordering Information

DESCRIPTION	PART NO.
Optronics Mini Visual Fault Locator - 650nm	OPTVFL-MINI
1.25 Adaptor available	OPTVFL-2-ADPT1.25

OPT-OFI Fibre Optic Live Fibre Identifier

The OPT-OFI Live Fibre Identifier will check for live network traffic and measure relative power anywhere on a multimode or singlemode fibre, without having to disconnect it from the network, avoiding any disruption to service provision. Test either 3mm or 2mm cable and 900µm or 250µm fibre with the accompanying interchangeable adapters.

OPT-OFI Fibre Optic Live Fibre Identifier

FAST FACTS

- Easy-to-use "ONE KEY" operation
- Efficiently identifies the traffic direction and displays the core power of the fibre
- Detect frequency tone when used with a tone generator (270 Hz, 1kHz, 2kHz)
- Low bending loss and highly efficient output
- Easy-to-replace adaptors
- Durable metal housing and quality construction

DID YOU KNOW

Fibre Identifiers operate by inducing a small macrobend on the fibre. If there is light present, a small amount will leak from the tiny bend and its direction of travel and relative power can then be measured. All this can be done mid-span along the fibre so there is no need to disconnect the fibre from the network, avoiding any disruption to service. The OPT-OFI can also detect and identify specific modulated frequencies transmitted down the fibre.

Standard Accessories:
4pcs adapter heads, alkaline battery, user manual, cotton swabs, soft carrying case

OPT-OFI Fibre Optic Live Fibre Identifier

Technical Specification

PARAMETER	VALUE	
Identified Wavelength Range (nm)	800-1700	
Identified Signal Type (Hz)	CW, 270 ±5%, 1k±5%, 2k ±5%	
Detector Type	1mm InGaAs 2pcs	
Adapter Type	250µm (Applicable for Bare Fiber) 900µm (Applicable for 0.9 Cable) 2mm (Applicable for 2.0 Cable) 3mm (Applicable for 3.0 Cable)	
Signal Direction	Left & Right LED	
Single Direction Test Range (dBm, CW/0.9mm bare fiber)	-46 to 10(1310nm) -50 to 10(1550nm)	
Signal Power Test Range (dBm, CW/0.9mm bare fiber)	-50 to 10	
Signal Frequency Display (Hz)	270, 1k, 2k	
Frequency Test Range (dBm, Average Value)	900µm, 2mm, 3mm	-30 to 0 (270Hz,1KHz)
		-25 to 0 (2KHz)
	250µm	-25 to 0 (1KHz,2KHz)
		-20 to 0 (2KHz)
Insertion Loss (dB, Typical Value)	0.8 (1310nm)	
	2.5 (1550nm)	
Alkaline Battry (V)	9	
Operating Temperature (°C)	-10 to 60	
Storage Temperature (°C)	-25 to 70	
Dimension (mm)	196 x 30.5 x 27	
Weight (g)	200	
Warranty (year)	1	

STEP 1

Slide on correct adapter for the fibre being tested.

STEP 2

Place fibre in the groove of the adapter head.

STEP 3

Slide adapter head up using clamp button.

STEP 5

Take note of result (signal direction and power level in dB).

STEP 4

Place the shade cover over the LED and fibre.

Ordering Information

DESCRIPTION	PART NO.
Optical Fibre Indentifier	**OPT-O-FI**

OPT-FOTS Fibre Optic Talk Set

The Optronics OPT-FOTS combines the functions of both a digital optical talk set and a stabilized light source. Designed for use over singlemode optical fibres in LAN, FTTH & Telecomms networks, the talk set's hands-free operation is simple to use and allows for full-duplex voice digital communication with a high quality connection ensuring a clarity of voice at all times. Compact in size and easy to use, the Optronics OPT-FOTS is the perfect portable companion for an engineer to carry with them on site during field testing. The OPT-FOTS can also be used as a stabilised light source with the capability to modulate the signal for tone generation and detection.

FAST FACTS

- > Full-duplex digital voice communication
- > Stabilized light source
- > Portable, rugged and lightweight
- > Easy to use
- > Large LCD display with backlight
- > Long battery life up to 10 hours
- > Dust, water and shock proof, designed for use in the field

Application

Telecommunication/CATV project maintenance, aid in attenuation measurement, Optical communication teaching and research

OPT-FOTS Fibre Optic Talk Set

Technical Specification

PARAMETER	VALUE
Operating Wavelength	1310/1550 nm
Emitter Type	FP-LD
Optical Connector Type	FC/PC fixed
Transmission distance	80 km
Dynamic Range	40 dB
Output Power	-5- -7dBm(9/125um), CW or 2KHz, 1KHz, 270Hz Modulation
Output Stability	≤ ±0.05dB
Power Supply	Alkaline battery x 3 or 8.4v power adapter
Battery Operating Time	10hrs
Operating Temperature	-10 - 60 °C
Storage Temperature	-25 - 70 °C
Dimensions	192 mm x 102 mm x 50 mm
Weight	338 g

Standard Kit Contents

ITEM	QUANTITY
Fibre Optic Talk Set	2
Headset	2
Power Supply Adaptor	2
AA battery	6
User Manual	1
Soft carrying case	2

Ordering Information

DESCRIPTION	PART NO.
Optronics Fibre Optic Talk Set	OPT-FOTS

OPT-VFIP Fibre Optic Video Inspection Probe

The Optronics Video Fibre Inspection Probe (OPT-VFIP) is the perfect tool for ensuring that fibre optic connector end faces are clean and clear from dirt and contamination; the number one cause of network failure. The lightweight, compact probe fits comfortably in the palm of the hand and with single-handed focusing it is easy to establish a clear, sharp image of the connector end face. The probe has a magnification of 150x and uses coaxial illumination to show a greater level of detail with an optical resolution of 1.5µm. The rugged handheld video display unit has a 2.5" LCD screen and is operated using an easy to navigate menu system. The unit accepts SD memory cards for image or video data storage of contaminated or cleaned connector end faces. The interchangeable inspection tips facilitate the inspection of both unmated connectors and connectors installed in patch panels or inside hardware devises.

Image viewed through coaxial illumination
below shows clean connector
downloaded from SD card with time and date of image capture

FAST FACTS

- > 150x magnification shows more of the contact area for better cleaning
- > Coaxial illumination for greater detail
- > 1.5µm optical resolution
- > Interchangeable tips for greater flexibility
- Image and video capture facility
- > 2GB SD card and USB card reader
- > Rugged, handheld & compact design, built for use in the field
- > Over 8hrs operation with rechargeable Li-Ion battery

Standard Accessories

ACCESSORY	QUANTITY	ACCESSORY	QUANTITY
Probe	1	USB 2.0 to USB mini cable	1
Video Display	1	User Manual	1
AC Adaptor		AV output cable	
2BG SD card	1	Earpiece	1
Tip set (Universal 2.5mm PC male, FC/SC PC female, LC PC female)	1	Softcase with carry strap	1

OPT-VFIP Fibre Optic Video Inspection Probe

Technical Specification

PROBE	VALUE
Size (LxWxH) (mm)	18.6 x 5.2 x 5
Weight (g)	170
Resolution (µm)	1.25
Optical Magnification (x)	12
Viewable area (mm)	0.3 x 0.28
Electronic viewfinder	1/3 inch black and white CCD
Light Source	Blue LED
Focus control	Manual coaxial focus
Connector	4PIN
Operating temperature (°C)	-20 to 50
DISPLAY	**VALUE**
Size (LxWxH) (mm)	164x100x43
Weight (g)	412
Frequency (MHz)	2.4
Display Size (inch)	2.5 (960 x 240 LCD)
Output Mode	NTSC / PAL
Video Mode	NTSC / PAL
Resolution	640 x 480 / 320 x 240
Compressed video format	MPEG-4 / AVI
Playing Format	MPEG-4 / AVI / ASF / MOV
Storage media	SD / MMC / U disk
Power supply	DC 5v 2A
Battery	Lithium battery 1800Mah
Operating time (hrs)	8

Ordering Information

DESCRIPTION	PART NO.
Optronics Handheld Video Fibre Inspection Probe with Image Capture	**OPT-VFIP**
Adapter for OPT-VFIP - Universal 1.25mm PC Connectors (Male)	**OPT-VFIP-1.25**
Adapter for OPT-VFIP - ST PC Connectors (Female)	**OPT-VFIP-ST**
Adapter for OPT-VFIP - MU PC Connectors (Female)	**OPT-VFIP-MU**
Adapter for OPT-VFIP - 2.5mm APC Connectors (Male)	**OPT-VFIP-2.5A**
Adapter for OPT-VFIP - FC APC Connectors (Female)	**OPT-VFIP-FCA**
Adapter for OPT-VFIP - SC APC Connectors (Female)	**OPT-VFIP-SCA**
Adapter for OPT-VFIP - LC APC Connectors (Female)	**OPT-VFIP-LCA**
Adapter for OPT-VFIP - E2000 PC Connectors (Female)	**OPT-VFIP-E2**
Adapter for OPT-VFIP - E2000 APC Connectors (Female)	**OPT-VFIP-E2A**

OPT-FHS-200/400 Fibre Optic Hand Held Inspection Scope

The OPT-FHS series hand held fibre inspection microscopes are an ideal choice for checking field terminations for fibre end-face quality. A combination of durable construction, comfortable design, easy operation and quality optics ensures that this tool will enhance the performance of installation and maintenance staff.

The OPT-FHS scopes are designed with a professional grade coaxial illumination system. This maximises the detail seen by the user, because the light travels along the same axis as the end face making even fine scratches and contaminates easily visible.

The OPT-FHS series is equipped with a laser attenuation filter for your safety. Laser attenuation filters provide excellent eye protection. However, they are not a substitute for practising good laser safety. Never attach or view a live fibre with any optical fibre microscope.

22.5 cm

OPT-FHS-200/400 Fibre Optic Hand Held Inspection Scope

5.8 cm

FAST FACTS

- Safety filter for eye protection
- Coaxial illumination of connector end face
- High quality glass optics
- Anti-slip design, rugged body
- Long battery life
- 2.5mm & 1.25mm connector adapters included

DID YOU KNOW

Contaminated connectors are the largest single cause of optical link failure, so end-face inspection is a critical part of fibre installation and maintenance. Before insertion, all end-faces should be inspected and, if a connector is being mated to a port, the port must be inspected also. Only inspecting one side of a connection is ineffective as contamination inside a port can not only cause damage but also migrate to the connector being inserted. It is important to also consider equipment ports as they may well be contaminated and therefore a source of contamination and damage for test cords.

OPT-FHS-200/400 Fibre Optic Hand Held Inspection Scope

Technical Specification

PARAMETER	VALUE
Size (LxWxH) (mm)	225x58x27.5
Weight (kg)	0.63 kg (with batteries)
Magnification	200x or 400x
Power	3x AAA Alkaline batteries
Capacity	External SD Card
LED life (hrs)	100,000
Battey Life (hrs)	32 hours typical use with alkaline batteries

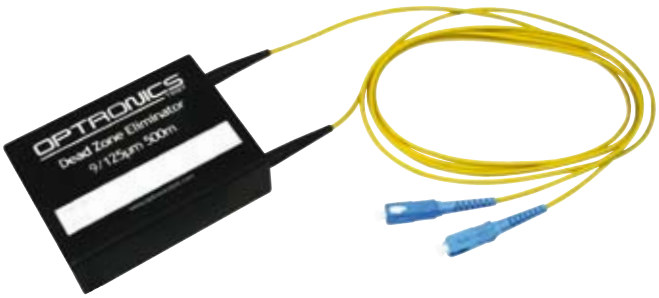
Ordering Information

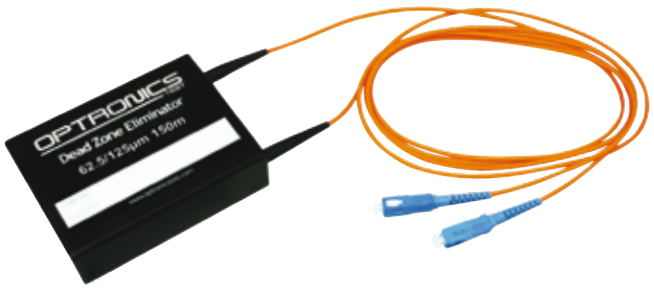
DESCRIPTION	PART NO.
200x Coaxial illumination hand held fibre scope	OPT-FHS-200x
400x Coaxial illumination hand held fibre scope	OPT-FHS-400x

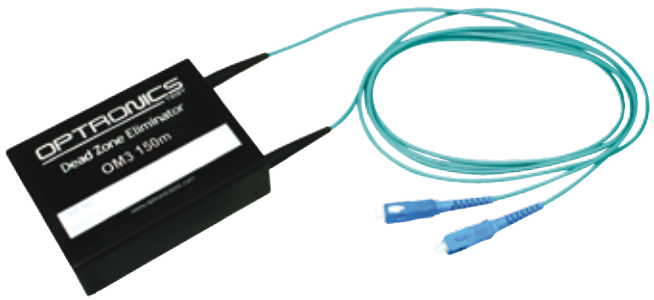
Soft Carry Case

Fibre Optic Compact Dead Zone Eliminator

The Optronics Test Dead Zone Eliminator is an essential tool for anyone undertaking OTDR testing. Placed between the OTDR and the link under test, the Dead Zone Eliminator allows for an accurate reading of both insertion loss and back reflection of the near end connector. Housed in a light, compact, rugged box, the Optronics Dead Zone Eliminator is available in all major fibre types in lengths of up to 1km.





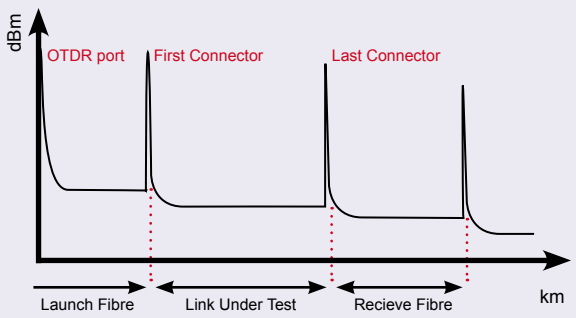


FAST FACTS

- 1.5mm tails
- Choice of connectors
- Standard lengths of 150m (MM) and 500m (SM) lengths up to 1km available on request
- Continuous uninteruppted link - no splicing
- Compact solution
- 50N cable retention force

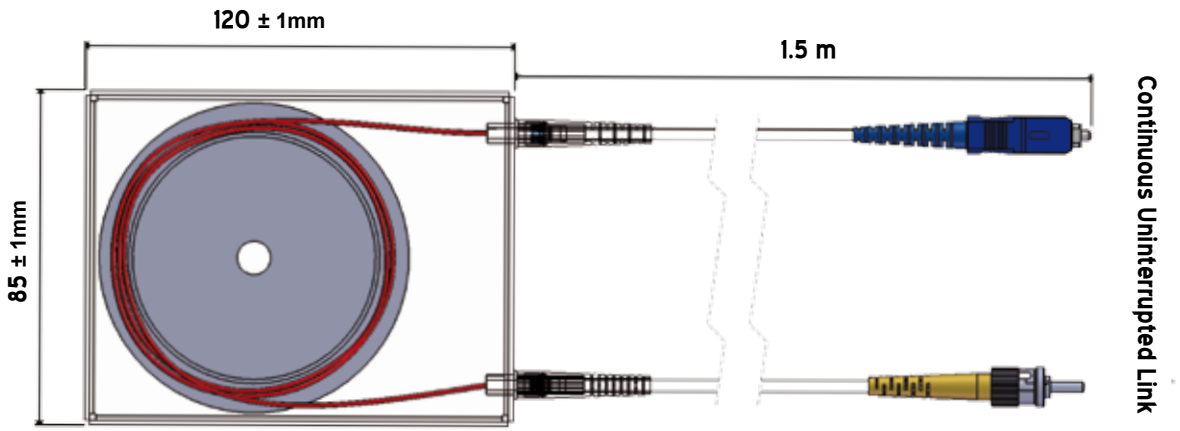
DID YOU KNOW

An OTDR requires a launch fibre (or Deadzone Eliminator) to be added to the link under test in order to provide an accurate reading of both insertion loss and back reflection of the near end connector. Inserted between the OTDR port and the first connector of the link under test, the launch fibre gives the light time to stabilise before it reaches the first connector, enabling the OTDR to make an accurate measurement. A receive fibre should also be placed at the end of the link under test to accurately measure the performance of the last connector.



FC SC ST LC E 2000

Fibre Optic Compact Dead Zone Eliminator



Technical Specification

Description	Value
Operating Temperature (C)	-40 to +85
Intermateability	Compliant with IEC 61754 series
Fire Performance	Compliant with IEC 60332-1

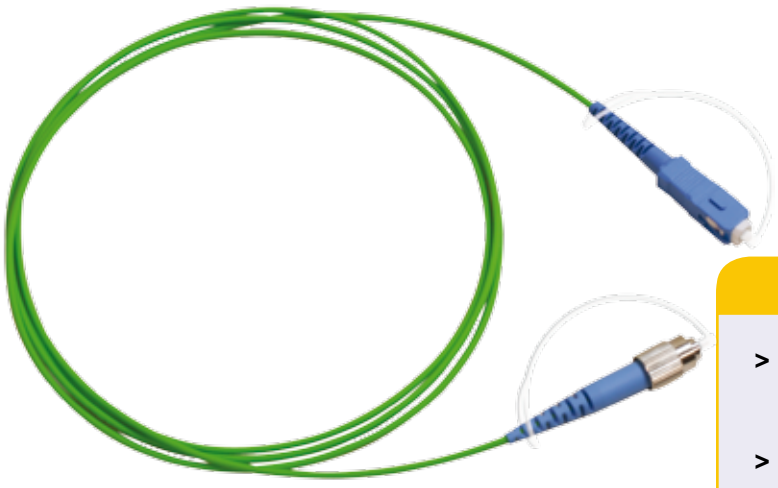
Soft Case

Part Number Generator

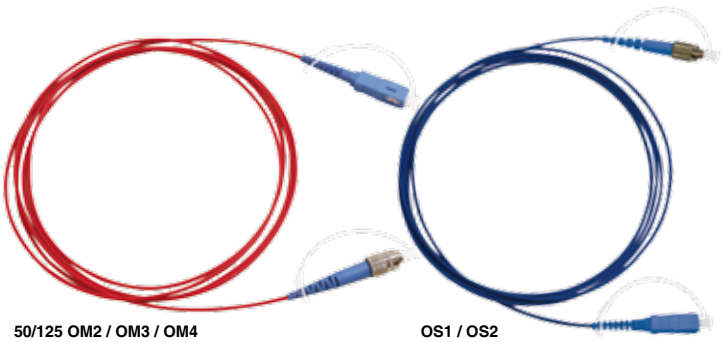
Connector 1		Connector 2		Fibre Type		DZCOMPACT
FC	FC	FC	FC	OM1	62	
FCAPC	FCA	FCAPC	FCA	OM2	50	
SC	SC	SC	SC	OM3	OM3	
SCAPC	SCA	SCAPC	SCA	OM4	OM4	
LC	LC	LC	LC	OS1/2	09	
LCAPC	LCA	LCAPC	LCA	G657A1	G657A1	
ST	ST	ST	ST			
E2000	E2000	E2000	E2000			

Fibre Optic Master Test Leads

The Optronics range of Master Test Leads is ideal for high precision and high performance optical test applications. The test leads are terminated with the highest quality physical contact (singlemode) A Grade zirconia ferrule connectors. The connectors are manufactured with precision mounting and polishing techniques which ensure excellent mating characteristics and optimised optical performance.



62.5/125 OM1



50/125 OM2 / OM3 / OM4

OS1 / OS2

FAST FACTS

- Optimised geometry of fibre, cable and connector providing reduced installation time and cost through improved accuracy and reliability of measurement
- Conforms to IEC, EIA-TIA, and Telecordia performance requirements
- Supplied with ultra tight geometry ITU-T G.652D (LWP) singlemode and multimode optical fibres
- Available with FC, SC, LC, & ST high performance connector types to suit majority of applications
- Available in standard lengths
- RoHS, REACH & SvHC compliant
- Optional foam lined storage case for added protection
- Tethered dust caps for protection of the connector end face
- End face geometry, concentricity and IL / RL test report provided

Cable Specification

CHARACTERISTICS	UNITS	SIMPLEX
Cable Material		LSZH
Strength Member		Aramid
Crush	N	1000
Operating Temperature	°C	-20 to 60
Secondary Buffer Diameter (2.0mm, 2.4mm and 3.0mm)	µm	900±50
Secondary Buffer Diameter (1.6mm and 1.8mm)	µm	600±50
Colour		OS1/2 ITU-T G.652D SM – Blue OM1 62.5/125 – Green OM2, OM3, OM4 50/125 – Red

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Connector Specification

OPTICAL PERFORMANCE	SINGLEMODE**	MULTIMODE	CONFORMANCE
IL MAX/ Master (Acceptance)	0.10 dB	0.10 dB	IEC 61300-3-4
MAX IL/Random	0.20 dB	0.25 dB	IEC 61300-3-34
Ave/Master*	0.08 dB	0.08 dB	IEC 61300-3-4
Ave/Random*	0.08 dB	0.10 dB	IEC 61300-3-34
Return Loss	55/65 dB	-	IEC 61300-3-6
Concentricity / Eccentricity Max fibre to ferrule OD finished product	0.8µm Max / 0.4 µm Max	1.5 µm Max / 0.75 µm Max	
Apex Offset	50 µm Max	50 µm Max	
Radius of curvature (ST, SC, FC)	10mm Min / 20mm Max		
Radius of curvature (LC)	5mm Min / 12mm Max		
Mechanical endurance	500 matings		IEC 61300-2-2
Vibration	10-55 Hz, 0.75 amplitude		IEC 61300-2-1
Drop	Drop height 1m, 5 drops		IEC 61300-2-12
Cable retention	2mm = 70N		IEC 61300-2-4
Cable torsion	1.5kg-2.5 kg		IEC 61300-2-5

* The change in attenuation for all the above listed criteria shall be a maximum of 0.10dB
**APC available on request

Fibre Bend Specification

CHARACTERISTICS	UNITS	SINGLEMODE	
Cladding Diameter	µm	125±0.4	
Core/Cladding Concentricity Error	µm	≤0.3	
Cladding Non Circularity	%	≤0.3	
Mode Field Diameter (mfd) @ 1310nm	µm	9.0±0.4	
Mode Field Diameter (mfd) @ 1550nm	µm	10.1±0.5	
CHARACTERISTICS		**MULTIMODE OM1**	**MULTIMODE OM2, OM3, OM4**
Cladding Diameter	µm	125±1	125±1
Core Diameter	µm	62.5±1	50±1
Core/Cladding Concentricity Error	µm	< 1.0	< 1.0
Cladding Non Circularity	%	< 1.0	< 1.0
Numerical Aperture		0.275 ± 0.015	0.2 ± 0.015

Hard Carry Case

Part Number Generator

			S	2	L			TL/Z
Master Side	Equipment side	Fibre Type	Fibre Construction	Cable Diameter	Jacket Type	Colour	Length (m)	Test Lead
FC FC	FC FC	OM1 1T	Simplex S	2mm 2	LSZH L	Green OM1 G	1m 1	
SC SC	SC SC	OM2/ OM3/ OM4 3T				Red OM2/ OM3/OM4 R	1.5m 1.5	
LC LC		OS1/OS2 9T				Blue OS1/2 B	2m 2	
ST ST								

OPT-FSPL-KIT Fibre Optic Automatic Fusion Splicer

The Optronics OPT-FSPL fusion splicer uses a core-to-core PAS (Profile Alignment System) to provide the best possible termination of optical fibres. Suitable for use with multimode and singlemode fibres, as well as DS, NZDS and EDF fibres, users can also configure their own programs enabling different fibres to be spliced when necessary. Complete with a precision cleave tool and fibre strippers, all packed in a hard carry case, the OPT-FSPL-KIT is the total splicing package.

OPT-FSPL-KIT Fibre Optic Automatic Fusion Splicer

FAST FACTS

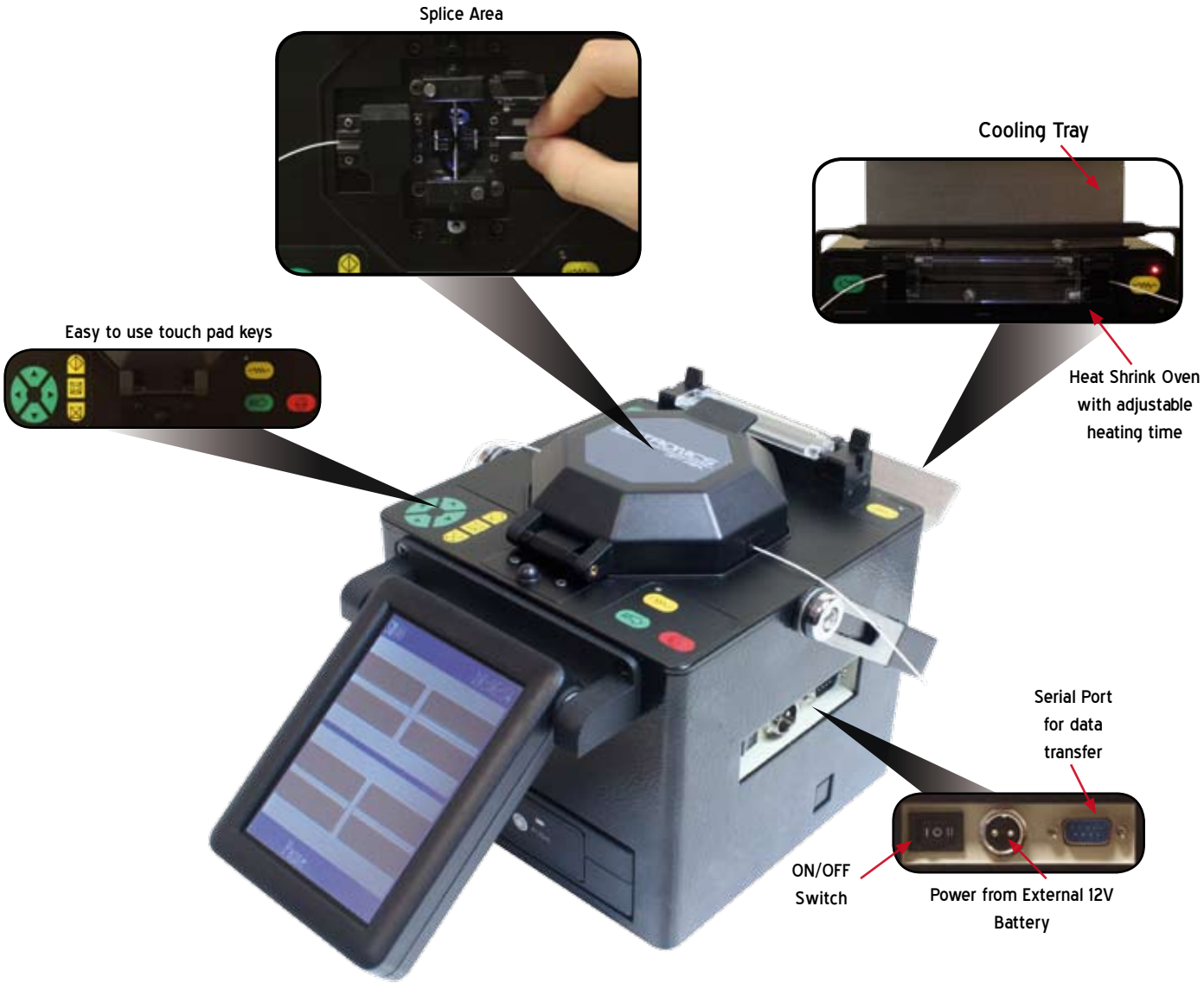
- Core to Core alignment
- Colour LCD screen
- Simultaneous X and Y views
- Result storage
- 8 second splice time
- Long battery life (200 splice & heat cycles)

DID YOU KNOW

Fusion splicing is a method for joining two optical fibre cores by melting the ends together using an electric arc. Only a splicing machine can provide the high degree of accuracy and control necessary.
The correct preparation of the fibres is vital to ensure an accurate splice. Any protective coating must be stripped from each fibre. The fibres are then cleaned and cleaved using a precision cleave tool, then placed carefully in to the fusion splicer. The machine first inspects the end-faces to ensure a satisfactory cleave has been obtained. It then aligns the cleaned and cleaved cores, applying heat from a controlled electrical arc to melt the fibre ends before pressing them together.

View our video at www.optronicsnet.com for more information

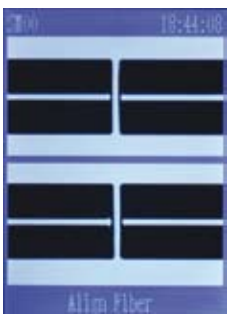
OPT-FSPL-KIT Fibre Optic Automatic Fusion Splicer


Splice Area
Cooling Tray
Easy to use touch pad keys
Heat Shrink Oven with adjustable heating time
Serial Port for data transfer
ON/OFF Switch
Power from External 12V Battery

STEP 1

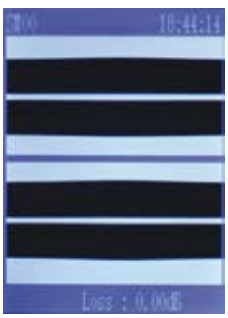
The two fibres are brought together automatically

STEP 2



The cores are aligned

STEP 3



The fibres are fused together the loss is estimated in dB

STEP 4

Lift the windshield. The unit performs a 2N tension test

OPT-FSPL-KIT Fibre Optic Automatic Fusion Splicer

Precision Cleave Tool

The Optronics high precision cleave tool is supplied as standard. The 16 position cleave wheel is capable of up to 3000 uses per position giving a total of 48000 cleaves before the +wheel needs to be changed. It can be used with both 250µm and 900µm fibres with a cleave length of 10-20mm.

3 Simple steps to a perfect cleave

Load the stripped fibre into the V-groove

Close the cover

Push through the blade

Packed With Accessories

OPT-FSPL-KIT Fibre Optic Automatic Fusion Splicer

Technical Specification

PARAMETER	VALUE
Monitor	Colour LCD, x200 magnification, simultaneous display of X and Y axis
Heater	Internal heat shrink oven
Storage	8000 results
Data Transmission	RS232
Applicable Fibres	SM, MM, DS, NZDS, EDF
Cladding Diameter (µm)	100 to 150
Coating Diameter (µm)	100 to 1000
Fibre Cleave Length (mm)	8-22
Splicing Mode	Auto and Manual
Average Splice Loss (dB)	0.02(SM), 0.01dB(MM), 0.04(DS), 0.04(NZDS)
Return Loss (dB)	>60
Operating Temperature (˚C)	-25 to +50
Storage Temperature (˚C)	-40 to +80
Relative Humidity (%)	0 to 95 non condensing
Protection Sleeve Length (mm)	20 - 60
Tension Test (N)	2.0
Language	English, Spanish, French, Chinese, Korean, Russian
Power Supply	AC 100-240volt, 50/60Hz, 30W DC 12volt, 25W
Battery	Li-LION 12V 10Ah
Dimensions (mm)	170 (W) x 140 (H) x 170 (D)
Weight (kg)	3.3
Warranty (year)	1

Ordering Information

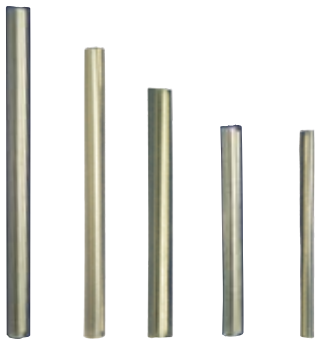
DESCRIPTION	PART NO.
Fusion splicer, AC adaptor and power cord, Battery, charger, spare electrodes, cooling tray, precision cleave tool, buffer stripper, carry case	OPT-FSPL-KIT
Precision Cleave Tool	OPT-FSPL-PCT
Battery for fusion splicer	OPT-FSPL-BATT
Electrodes for fusion splicer	OPT-FSPL-ELEC
AC power supply for fusion Splicer	OPT-FSPL-PSU
12V cable connection to vechle power outlet	OPT-FSPL-12VC
Extended warranty for OPT-FSPL + 1year	OPT-FSPL-WAR1
Extended warranty for OPT-FSPL + 2year	OPT-FSPL-WAR2
Extended warranty for OPT-FSPL + 3year	OPT-FSPL-WAR3

Fibre Optic Fusion Splice Protectors

Optronics's splice protectors are designed to maintain the strength & environmental stability of optical fibre cables after fusion splicing.

FAST FACTS

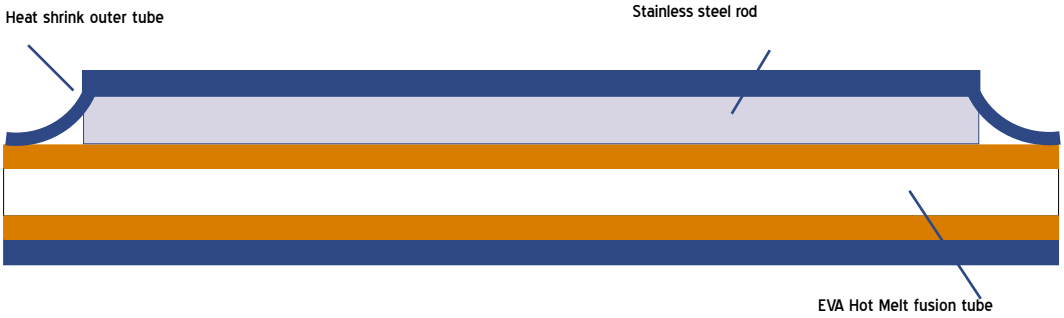
- > Maintains optical properties of fibre
- > Provides strength and protection to optical fibre splices
- > Easy to use and install without damaging splice
- > Clear sleeve to allow visual location of splice prior to shrinking
- > Sealant protects splice

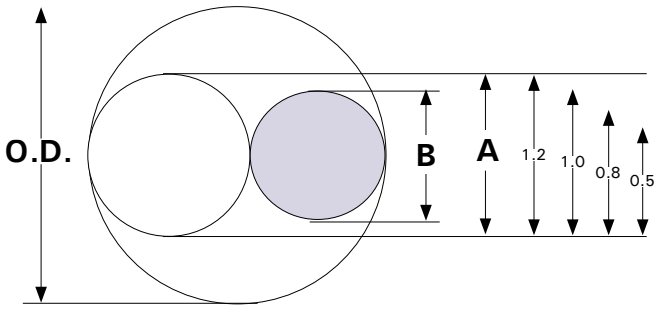


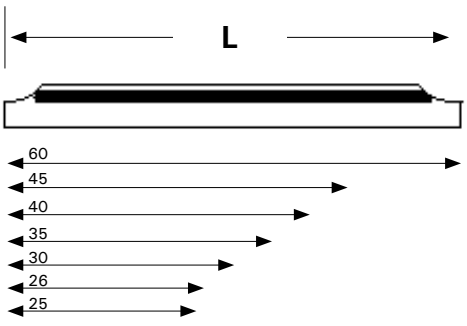
Fibre Optic Fusion Splice Protectors

Application

Used in fibre optic fusion splicing. Turn to page 26 to see our Optronics Fusion Splicer







Technical Specification

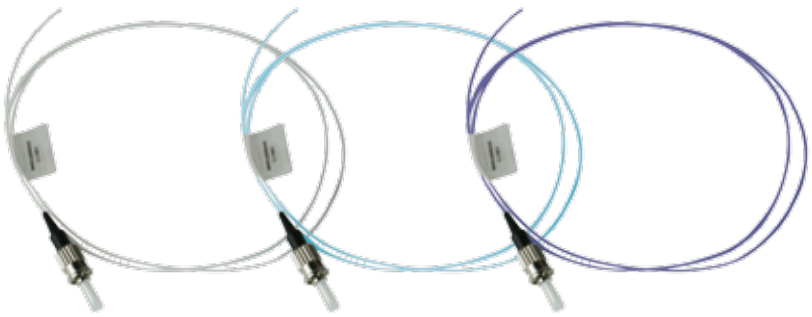
SPECIFICATIONS	VALUES
Stainless Rod	301 Grade
Shrink Process	Heat to 125 C / maintain 80 seconds / cool
Outer Tube	Cross-linked polyolefin
Inner Tube	Ethylene Vinyl Acetate
Construction	Outer tube encloses and captures fusion tube and rod. Fusion tube centred in assembly.

Ordering Information

SPLICE PROTECTOR (L)		TUBE (A)		ROD (B)	TUBE COLOUR		
O.D RECOVERED	LENGTH	I.D	LENGTH	O.D	OUTER/INNER	PACKING	PART NO.
2.5±0.2	45±1	1.2±0.1	43±1	1.0±0.1	Clear/Clear	100/pcs	Splice45Clear
2.5±0.2	60±1	1.2±0.1	58±1	1.0±0.1	Clear/Clear	100/pcs	Splice60Clear
3.0±0.2	60±1	1.2±0.1	58±1	1.0±0.1	Clear/Clear	100/pcs	Splice60Clear3MM
2.5±0.2	45±1	1.2±0.1	43±1	1.0±0.1	Various/Various*	Call	Splice45Colour
1.5±0.2	25±1	0.95±0.1	23±1	0.5±0.1	Clear/Clear	100/pcs	Call the sales team
1.5±0.2	35±1	1.8±0.1	33±1	0.5±0.1	Clear/Clear	100/pcs	Call the sales team
1.5±0.2	20±1	0.95±0.1	18±1	0.5±0.1	Clear/Clear	100/pcs	Call the sales team
1.4±0.2	26±1	0.95±0.1	23±1	0.5±0.1	Clear/Clear	100/pcs	Call the sales team
2±0.2	25±1	1.6±0.1	22±1	0.8±0.1	Clear/Clear	100/pcs	Call the sales team
2.5±0.2	40±1	1.6±0.1	37±1	1.2±0.1	Clear/Clear	100/pcs	Call the sales team
2.5±0.2	30±1	1.75±0.1	27±1	1.2±0.1	Clear/Clear	100/pcs	Call the sales team

*Pack Comprises of :
12 individual splices in a single bag. The colour set includes the colours designated in IEC 60304: Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Rose and Aqua.

The Optronics portfolio of fibre assemblies also includes Fibre Optic Pigtails



OPT-CLEAVE77 Fibre Optic Cleaving Tool

The OPT-CLEAVE 77 cleaver is a precision fibre cutting tool, suitable for use with 250µm or 900µm primary and secondary coated optical fibres with a 125 fibre cladding diameter. The 16 position blade is capable of performing up to 48000 fibre cleaves before it needs replacing.

OPT-CLEAVE77 Fibre Optic Cleaving Tool

FAST FACTS

- Easy use
- Simple maintenance
- Compact lightweight construction
- Built in sharps bin
- Controlled magnetic action
- Replaceable long life blade

DID YOU KNOW

A fibre cleave is initiated by lightly scoring the surface of a fibre using a precision blade. When the fibre is subsequently pulled or bent the pressure generates a crack and results in a clean and flat cleave.

Hard Carry Case

Technical Specification

PARAMETER	VALUE
Blade lifetime (cleaves)	48000
Maximum cleave angle	75% < 0.5
Weight (g)	350
Size (LxWxH) (mm)	72x81x62
Cleave length (mm)	3-20

Ordering Information

DESCRIPTION	PART NO.
Optronics high performance optical fibre cleaver	OPT-CLEAVE77
Replacement blade	OPT-CLEAVE77-BLD

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Fibre Optic Cleaning Kits

The Optronics fibre optic cleaning kits combine all the best and most widely used products in one simple to use package. They contain all the necessary products to competently and professionally clean fibre optic installations. With 3 levels of kit available it's easier to choose the right one for the application.

Fibre Optic Cleaning Kits

FAST FACTS

- High quality products
- 3 levels depending on user application
- Products available individually for kit refill
- Provided in a soft carry case

Contents

PRODUCT DESCRIPTION	KIT N°1	KIT N°2	KIT N°3	PART NO.
Lint Free Cleaning Tissues	100 pieces	100 pieces	100 pieces	CLEANTISSUE
2.5mm Foam Cleaning Buds	100 pieces	100 pieces	100 pieces	CLEANBUDS
1.25mm MicroFibre Cleaning Sticks	100 pieces	100 pieces	100 pieces	CLEANSTICK
IPA Cleaning Wipes	10 pieces	10 pieces	10 pieces	CLEANWIPES
FibreCare Connector Cleaning Fluid	1 piece	1 piece	1 piece	FCC03M
FibreCare Fibre Preparation Fluid	1 piece	1 piece	1 piece	FPF03M
Cletop-S Type B Cassette Cleaner	--	1 piece	1 piece	201-46A/B/WHT
Fibre Inspection Scope 200x	--	--	1 piece	OPT-FHS-200X
Soft Black Carry Case	1 piece	1 piece	1 piece	OPT-SOFTCASE-B

Ordering Information

DESCRIPTION	PART NO.
Optronics Fibre Optic Cleaning Kit N 1	CLEANKIT-L1
Optronics Fibre Optic Cleaning Kit N 2	CLEANKIT-L2/EU
Optronics Fibre Optic Cleaning Kit N 3	CLEANKIT-L3/EU

OPT-COLDKIT Fibre Optic Cold Cure Termination and Inspection Kit

The Optronics cold cure fibre termination and inspection kit is a much needed and valuable kit for anyone wishing to terminate fibre using the cold cure methods. This kit is suited to anyone who is competent at terminating fibre. The kit contains the Optronics range of tools (contents listed below) and an inspection scope also comes as standard. All items are packed in their own cut-foam compartment to keep them safe from damage and are presented in a robust, virtually indestructible, yet stylish case, ideal for such fragile equipment. Optronics has recently updated and modernised its range of tool kits and they are a must-have for any installer in the fibre optic industry.

OPT-COLDKIT Kit

Technical Specification

ITEM	QUANTITY
Inspection Scope (x200 mag)	1
Fibre Optic Stripper (Tri Hole)	1
Kevlar Scissors	1
Fibre Optic Crimp Tool	1
Cable Ringing Tool	1
Universal Stripping Tool	1
Carbide Pen Scribe	1
Fluid Dispenser	1
Cin Bin	1
1.25mm Polishing Puck	1
2.5mm Polishing Puck	1
1" Yellow Syringe Tips	3
2ml Syringe	5
Lint Free Tissue	1 pack (100 sheets)
Lapping Film (0.3 / 1.0 / 5.0µm)	15 (5 of each µm)
Glass Polishing Plate	1
Cold Cure Epoxy	1
Cold Cure Activator	1 (UK) / 2 (EU)

Ordering Information

DESCRIPTION	PART NO.
Cold Cure Kit (UK)	OPT-COLDKIT
Cold Cure Kit (EU)	OPT-COLDKIT/EU

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OPT-HEATKIT Fibre Optic Heat Cure Termination and Inspection Kit

The Optronics heat cure fibre termination and inspection kit is a much needed and valuable kit for anyone wishing to terminate fibre using the heat cure method. This kit is suited to anyone who is competent at terminating fibre. The kit contains the Optronics range of tools (contents listed below) and an inspection scope also comes as standard. All items are packed in their own cut-foam compartment to keep them safe from damage, and are presented in a robust, virtually indestructible, yet stylish case, ideal for such fragile equipment. Optronics has recently updated and modernised its range of tool kits and they are a must-have for any installer in the fibre optic industry.

OPT-HEATKIT Kit

Technical Specification

ITEM	QUANTITY
Inspection Scope (x200 mag)	1
Fibre Optic Stripper (Tri Hole)	1
Kevlar Scissors	1
Fibre Optic Crimp Tool	1
Cable Ringing Tool	1
Universal Stripping Tool	1
Carbide Pen Scribe	1
Fluid Dispenser	1
Cin Bin	1
1.25mm Polishing Puck	1
2.5mm Polishing Puck	1
1" Yellow Syringe Tips	5
2ml Syringe	5
Lint Free Tissue	1 pack (100 sheets)
Lapping Film (0.3 / 1.0 / 5.0µm)	15 (5 of each µm)
Glass Polishing Plate	1
Heat Cure Epoxy (UK only)	5
Termination Oven	1

Ordering Information

DESCRIPTION	PART NO.
Heat Curing Kit (UK)	OPT-HEATKIT
Heat Curing Kit (EU) without Epoxy	OPT-HEATKIT/EU

Fibre Optic Termination Tools

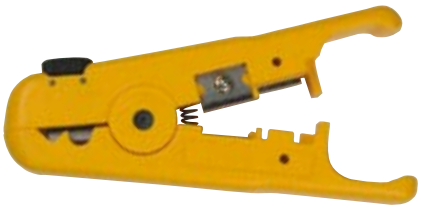
OPTRONICS TOOLS

JACKET STRIPPER

DESCRIPTION	PART NO.
Jacket Stripper	OPT-CS

Ideal for stripping jackets from backbone cable between 4.5mm and 25mm in diameter. A small rotating blade accurately splits the circumference of the jacket, then by flicking a switch, the same blade will rotate 90° and is used to split the jacket down one side for easy removal.

UNIVERSAL STRIPPER



DESCRIPTION	PART NO.
Universal Data Stripper	OPT+UTPS

This tool is ideally used for stripping the jacket from round data cable. With an adjustable blade it will strip from 3.2mm to 9mm on flat cable, irregular out of shape cable or even multi-conductor cable.

UTP/STP CYCLOPS STRIPPER

DESCRIPTION	PART NO.
Cyclops Stripper	OPT+CYCLOPS

An outer sheath stripper for all types of data, audio and fibre optic cables. Completely automatic, no adjustments required. For cables up to 11mm in diameter.

EASY HANDLE STRIPPER

DESCRIPTION	PART NO.
Easy Handle Stripper	OPT-FOS

This hard wearing, easy to handle fibre optic stripping tool includes three stripping guides for 2mm outer jacket, 900µm Buffer and 250µm acrylic coating, safety catch and factory set adjuster.

UNIVERSAL CRIMP TOOL

DESCRIPTION	PART NO.
Fibre Optic Crimp Tool	OPT-FOCT

This professional ratchet-style crimping tool is constructed of solid steel. The rubber handle provides a firm grip and includes a ratchet mechanism for consistent crimping.
Crimp Specifications: .78" / .151" / .128" / .78" / .068" / .042"
(4.52 / 3.84 / 3.25 / 2.0 / 1.72 / 1.07mm)

KEVLAR SCISSORS

DESCRIPTION	PART NO.
Kevlar® Scissors	OPT-KS

These light-weight shears are ideal for cutting the Kevlar® strength members found in fibre optic cables. Ergonomic, moulded handles provide comfort for both right and left-handed users. The micro-serrated blade reduces slipping for a more precise cutting action.
Length: 140mm Weight: 79g.
Kevlar is a registered trademark of DuPont

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OPTRONICS TOOLS

CARBIDE PEN CLEAVER

DESCRIPTION	PART NO.
Carbide Pen Cleaver	OPT-CPC

This well presented pen-style scribe uses a 30° wedge shaped carbide tip. Its design makes for quick and precise cleaving of optical fibre.

MILLER ARMOURED CABLE SLITTER

DESCRIPTION	PART NO.
Armoured Cable Slitter	ACS

Professional grade tool ideal for slitting the corrugated copper, steel or aluminium armour layer on fibre feeder, central tube, stranded loose Tube fibre optic cables and other armoured cables.

ABECO JACKET STRIPPING TOOL

DESCRIPTION	PART NO.
Jacket stripping tool	MK02

This stripper can be used on 4.5 to 28.5mm cable insulations and has an adjustable cutting depth of 3mm, as well as alternative blade options to suit different jacket types. Its stripping action is both circumferential and longitudinal, for the removal of insulation or mid span wires.

ABECO JACKET STRIPPING TOOL

DESCRIPTION	PART NO.
Jacket stripping tool	MK01A

Designed for precision stripping of a variety of insulation types including rubber, PVC, nylon, cotton and coaxial cables from 8mm to 25mm diameter. Its stripping action is both circumferential and longitudinal for the removal of insulation or mid-span wires.

MILLER FIBRE OPTIC STRIPPER

DESCRIPTION	PART NO.
Miller V-hole fibre optic strippers	FO103-S

These factory set strippers require no adjustment and prevent scratching or nicking of optical fibre. All cutting surfaces are precision formed, hardened, tempered and ground assuring precise buffer removal.

MILLER DUAL-HOLE FIBRE OPTIC STRIPPER 2

DESCRIPTION	PART NO.
Dual-hole fibre optic stripper	FO103-D-J

The FO103-D-J A 140µm diameter hole and V-opening in the blade make this tool ideal for stripping 250µm buffer coating to expose 125µm cladded fibre. A second hole strips 2-3mm fibre jackets. It is pre-set at the factory so no adjustments are needed.

Fibre Optic Termination Tools

OPTRONICS TOOLS

MILLER TRI-HOLE FIBRE OPTIC STRIPPER 1

DESCRIPTION	PART NO.
Tri-hole fibre optic cable stripper	FO103-T-250-J

The tri-hole fibre optic stripper is an exceptional tool, recommended for stripping 250µm coated loose tube fibre and 900µm buffer tube. This stripper has a .0055" (0.14mm) laser drilled hole, soft plastic cushioned handle grip and super accurate hardened stripping jaws ensuring a clean smooth stripping action.

CLAUSS FIBRE OPTIC STRIPPER

DESCRIPTION	PART NO.
Quality fibre optic cable stripper	CFS-2

The CF2-2 stripper incorporates two holes for stripping fibre optic cable. The first size accurately removes 250µm coatings and 900µm buffer tube. The second hole is able to strip cable jackets up to 3mm diameter.

NO-NIK FIBRE OPTIC STRIPPER

DESCRIPTION	PART NO.
NO-NIK 200µm fibre optic stripper	NN203

In a single short stroke the red handle removes 900µm buffer tube and the 250µm or 500µm fibre coating on tight buffer cable.

MILLER KEVLAR SHEARS

Description	PART NO.
Kevlar® Shears	KS-1

These lightweight shears are perfect for cutting Kevlar® strength members. The blades are made from high carbon molybdenum and vanadium steel for a long life and a precise neat cut. Kevlar is a registered trademark of DuPont

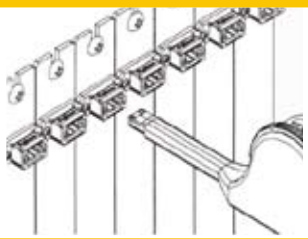
RIPLEY MAGNI TWEEZERS

DESCRIPTION	PART NO.
Magni tweezers	MT-1

This handy stainless steel tool is specifically suited to fibre optic applications. Its integral magnifier improves ability to work with small fibre optic segments.

Cleaning and Consumables Products

FIBRE OPTIC MPO CLEANER



DESCRIPTION	PART NO.
MPO Cleaner	**MPOCLEANER1**

The MPO / MTP® cleaner is a high-performance device designed for cleaning the ferrule endfaces of MPO / MTP® connectors. This tool cleans the fibre endface without the use of alcohol, cleaning all 12 fibres at once.

Other Cleaning Brands

KIMWIPES

MICROCARE

CLETOP

Production equipment

POLISHING MACHINES

CURING OVEN

POLISHING FILMS

Other

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